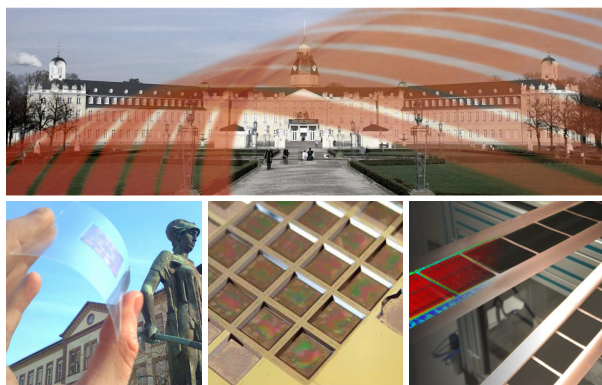


3rd Thin Film Technology Forum



The 3rd Thin Film Technology Forum will take place linked to the 10th Short Course Coating and Drying of Thin Films. Renowned scientists will present and discuss new trends in industry and academia with a focus on Printed Electronics, Battery and Smart Coatings.



June 7-8, 2018

KIT-Tagungszentrum (FTU)

Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen

Organisation: Prof. Dr.-Ing. Wilhelm Schabel
Dr.-Ing. Philip Scharfer

TFT Forum program

Schedule 07.06.2018 – TFT Forum Thursday

- 13:00 *TFT Forum get-together lunch (Finger Food)*
- 13:30 *Forum registration and materials handout*
- 14:00 *Welcome & Introduction to TFT Forum*
Prof. Dr.-Ing. W. Schabel / Dr.-Ing. P. Scharfer
- 14:10 *Welcome address to the 3rd TFT Forum at KIT*
Prof. Dr. Doris Wedlich (KIT)
Head of Division 1 (Biology, Chemistry, Proc. Engineering)

Printed and organic electronics processing

- 14:20 *Advances in organic & printed electronics processing*
Ir. Ike de Vries (Holst Centre, NL)
- 15:10 *Multilayer coating of organic electronics*
Lisa Merklein M. Sc. (KIT)
- 15:40 *Coffee break*
- 16:10 *Advances in digital direct printing*
Prof. Fritz Bircher (iPrint, CH)
- 17:00 *Inks for printed, soft, and transparent electronics*
Prof. Dr. Tobias Kraus (Leibniz-Institut für Neue Materialien)
- 19:30 *Get-together at BESITOS (Karlsruhe town square)*

Schedule 08.06.2018 – TFT Forum Friday

Battery Coatings

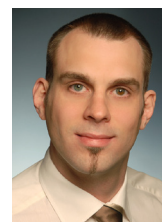
- 09:00 *Battery technologies beyond Li-Ion technology*
Prof. Dr. Stefano Passerini (Helmholtz-Institut Ulm)
- 09:30 *Industrial production of lithium-ion battery cells*
Dr. Armin Modlinger (Volkswagen AG)
- 10:00 *Advances in coating of Li-Ion battery electrodes*
Dipl.-Ing. Ralf Diehm (KIT)
- 10:30 *New insights into drying of Li-Ion battery electrodes*
Jana Kumberg M. Sc. (KIT)
- 11:00 *Discussion and coffee break*

Smart Coatings

- 11:30 *Applications in solution-processed functional films*
Prof. Dr. Frank Kleine Jäger (BASF SE)
- 12:00 *Drying of thin films of particle-laden pastes*
Prof. Dr.-Ing. Günter Brenn (TU Graz, AT)
- 12:30 *Enabling mobility for tomorrow with surface technology*
Dipl.-Ing Milan Madron (Schaeffler AG)
- 13:00 *Graphene dispersions for conductive paints*
Dr. Katerina Kampioti (CNRS Bordeaux, FR)
- 13:30 *TFT Forum closing session lunch (Finger Food)*



Prof. Dr.-Ing. Wilhelm Schabel (KIT) heads the research group Thin Film Technology at KIT (Campus South/Campus North). He studied process engineering with a doctor thesis in the field of film drying, honored with the Carl-Freudenberg Award in 2005. In 2007-2008 he worked as R&D engineer at LOFO High Tech Film. In 2007 his work was honored with the Arnold Eucken Award, in 2008 with the L.E. Scriven Award from ISCSST. Prof. Schabel is active in international drying, coating, processing and heat and mass transfer committees as chairman, director and vice president. He is an expert in film drying with coating expertise and (co-)author of more than 400 scientific contributions.



Dr.-Ing. Philip Scharfer (KIT) is head of the TFT group at KIT together with Prof. Schabel. He received his PhD in process engineering from the University of Karlsruhe (TH) in 2009. Dr. Scharfer is an expert in the fields of drying and thermodynamics of thin films. He deals with measuring methods for the investigation of polymer film drying and develops numerical simulation tools for industrial dryer applications. Dr. Scharfer is member of the scientific committee of the European Coating Symposium (ECS) and of the International Society of Coating Science and Technology (ISCSST). In 2014, he was awarded with the L. E. Scriven Young Investigator Award by the ISCSST.



Ir. Ike de Vries (HOLST CENTRE, NL) studied Chemistry at the Wageningen University, Netherlands. From 1988 to 2006 Ike de Vries was a project leader and process/research engineer in the field of extrusion coating and substrate development for ink jet and photographic paper at Fuji Photo Film. Since 2006, he is a research scientist at the Holst Centre in Eindhoven, The Netherlands. He utilizes his experience to develop new (R2R) processes which enable large scale production of organic light emitting diodes (OLEDs) and photovoltaic (PV). He is a board member of the European Coating Symposium (ECS) and the International Coating Science and Technology Symposium (ISCSST).



Fritz Bircher (iPrint, CH) studied electrical engineering at ETH Zurich. After graduating he worked as an R&D engineer for different companies developing mechatronic system solutions. In 1993 he was appointed professor at Bern University of Applied Sciences, where he started his research in inkjet printing, studying and exploring all possible jetting and dispensing principles with all kinds of materials in a wide range of applications. In 2012 he joined the University of Applied Sciences Western Switzerland in Fribourg, where he founded iPrint institute and iPrint Center for Digital Printing on the Marly Innovation Center. Fritz's main research interests based on inkjet printing include: packaging printing, direct-to-shape printing, material printing including 3D printing and bio printing.

Registration fee for 2-day Forum

	Early Bird (until 15.04.18)	later
2-day TFT Forum participation	€ 375.–	€ 425.–
GVT discount	€ 325.–	€ 375.–
Exhibition booth (incl. participation)	€ 775.–	€ 825.–
Exhibition booth (excl. participation)	€ 425.–	€ 475.–

Payment

According to §4 Nr. 22a USTG the registration fee is purchase tax free. Registration fees include a printed copy of presentations, coffee, refreshments, lunch and the TFT Forum get-together on Thursday evening. The TFT Forum is included in the Short Course registration.

Venue

The TFT Forum takes place at the KIT-Tagungszentrum (FTU), Lecture hall, Hermann-von-Helmholtz-Platz 1 in 76344 Eggenstein-Leopoldshafen.

Hotel recommendations

Hotel Kaiserhof, Hotel Novotel Karlsruhe City, City Partner Hotel Berliner Hof, Hotel Rio

Further information

www.thin-film-technology.de

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Further information



professor for colloid and interface chemistry at Saarland University.

Prof. Dr. Tobias Kraus (Leibniz-Institut für Neue Materialien) is a chemical engineer and materials scientist trained at TU Munich, MIT, and the University of Neuchatel. He obtained his PhD at ETH Zurich and the IBM Research Laboratory. His interests span physical chemistry, surface science, and process engineering of materials. He has been head of the Program Division "Structure Formation" since 2014 and is deputy head of the Innovation Center INM. In 2016, he became full



Lisa Merklein M. Sc. (KIT) completed her studies in Chemical Process Engineering at KIT in 2015, majoring in Thermal and Mechanical Process Engineering. Topic of her master's thesis was solution processing of nanolayers for organic electronics. Since 2016 she is working as research assistant at the KIT/TFT group, focusing on multilayer concepts for slot die coated OLEDs and the development of a fundamental understanding of interdiffusion in multilayer systems.



Award of the Electrochemical Society Battery Division. Since 2015 he has been appointed as Editor-in-Chief of the Journal of Power Sources.

Prof. Dr. Stefano Passerini (Helmholtz-Institut Ulm) leads the Electrochemistry for Batteries group at the Karlsruhe Institute of Technology, Helmholtz-Institute Ulm, since 2014. His research activities are focused on electrochemical energy storage in batteries and supercapacitors. Co-author of more than 450 scientific papers (Scopus H-Index: 66, > 3.300 citations in 2017), a few book chapters and several international patents. He has been awarded in 2012 the Research



took over responsibility for Product and Process Development at Litarion GmbH. In April 2018 he joined the Center of Excellence Batteriezelle within the Volkswagen Group.

Dr. Armin Modlinger (Volkswagen AG) graduated in Chemistry at the University of Bayreuth in 2000, followed by a doctoral degree in 2004 at the Technical University Munich. After a Postdoctoral fellowship at the University of Bristol he started his career in the chemical industry at Evonik Industries in 2006, working at different positions in R&D departments associated with Li-Ion Technology. 2013 he became head of process technology at Litarion GmbH and later in 2017 he



tions in high speed

Dipl.-Ing. Ralf Diehm (KIT) graduated in Process Engineering at KIT in 2014. Already during his studies he specialized on thin film coatings for organic electronics and Li-Ion batteries. Since 2014 he is working as research assistant at the KIT/TFT group, focussing on slot die coating and in particular of intermittent coating to provide a fundamental understanding of the process and its limitations. In 2015 he was awarded with the first price of the KIT "Neuland" award for his innovations in high speed intermittent slot die coating.



drying behavior of lithium ion battery electrodes.

Jana Kumberg M. Sc. (KIT) graduated in Process Engineering at KIT in 2015, majoring in Thermal Process Engineering and Mechanical Process Engineering. During her studies she started to focus on processing of thin films, investigating thermal treatment of polymer solar cells in her bachelor's thesis at TFT. She further specialized on drying technology in her master's studies. Since 2016 she is working as research assistant at the KIT/TFT group, investigating



from RWTH Aachen University, Germany. He also received his Habilitation from RWTH Aachen in 2004. Since 2011 he holds a Professorship as apl. Prof. Dr.-Ing. at RWTH Aachen.

Prof. Dr.-Ing. Frank Kleine Jäger (BASF SE) is currently Senior Research Manager and Head of Solids Formulation and Handling Group at BASF SE in Ludwigshafen. In this role, he manages the global R&D activities in this field of Solids and Film Processing ranging from development of new process technologies and optimization to trouble shooting and bottlenecking in BASF's global production plants. He is Chemical Engineer with Diploma and PhD degrees



stability, liquid-gas two-phase flows, rheology and rheometry, heat and mass transfer, and optical flow measuring techniques.

Prof. Dr. Günter Brenn (TU Graz, AT) graduated in Aerospace Engineering from the University of Stuttgart and received his doctor's degree in 1990. He did his habilitation at the Chair of Fluid Mechanics (LSTM) of the University of Erlangen-Nuremberg (Prof. Dr. F. Durst) in 1999 and was appointed chair of the Institute of Fluid Mechanics and Heat Transfer at Graz University of Technology (A) in 2002. His research interests are capillary hydrodynamics and



and sol-gel processes at Schaeffler world-wide.

Milan Madron (Schaeffler AG) finished his diploma in "Material Engineering" at the Nuremberg Institute of Technology in 2009 followed by a master's degree in "New Material, Nano and Production Technology" in 2011. Since 2011 he is working in the Competence Center Surface Technology at Schaeffler Technologies AG & Co. KG. Since 2015 he is a senior specialist and responsible for all painting



obtained her PhD in physical chemistry in 2016 from the University of Bordeaux. She has been working in a European (program H2020) and a French project (BPI) involving the preparation of formulations for different applications: from rubber composites to paints. She was awarded for the best oral communication during the 18th Scientific Day of the Doctoral School of Chemical Sciences in Bordeaux.

Dr. Katerina Kampioti (CNRS Bordeaux, FR)